KIVI, K.A., aspirant; DEGTYAREVA, A.S., kand.biolog.nauk; SHELESTOVA, V.S.

Brief information. Zashch. rast. ot vred. i bol. 8 no.12:46-47 D '63. (MIRA 17:3)

1. Estonskaya sel'skokhozyaystvennaya akademiya, Tartu (for Kivi).
2. Ukrainskiy institut zashchity rasteniy i Ukrainskaya sel'skokhozyaystvennaya akademiya (for Degtyareva, Shelestova).

DEGTYAR'OVA, A.S. [Dehtiar'ova, A.S.]; SHELESTOVA, V.S.

New insecticides for the control of the apple codling moth. Khim. prom. [Ukr.] no.1:44-46 Ja-Mr '64. (MIRA 17:3)

SHELESTOVA, E.P., nauchnyy sotrudnik; VASIL'CHENKO, T.A., nauchnyy sotrudnik

Vomiting of the color of coffee grounds in dysentery in infants. Pediatriia no.2:39-40 Mr-Ap '54. (MLRA 7:6)

1. Iz L'vovskogo nauchno-issledovatel'skogo instituta okhrany materinstva i detstva (i.o.direktora-kandidat meditsinskikh nauk M.L.Zalotavina, nauchnyi rukovoditel'-prof. S.I.Ignatov)
(DYSENTERY, in infant and child,
*vomiting, dark brown color of)
(VOMITING, in various diseases,
*dysentery in inf., dark brown color of)

SHELESTOVA, Ye. P.: Master Med Sci (diss) -- "Pathomorphological changes in the placenta in women with pulmonary tuberculosis". Dnepropetrovsk, 1959. 16 pp (Min Health Ukr SSR, Dnepropetrovsk,State Med Inst), 200 copies (KL, No 17, 1959, 112)

SHELESTOVA, Ye.P.; YERSHOVA, A.S.

Rare case of tuberculosis and cancer of the uterus. Akush. i gin. no.2:129-130'63. (MIRA 16:10)

1. Iz L'vovskogo nauchno-issledovatel'skogo instituta okhrany materinstva i detstva (dir. -- kand.med.nauk L.Ya.Davydov).
(UTERUS - CANCER) (UTERUS -- TUBERCULOSIS)

SHELESTYUK, P.I.

Case of extensive resection of the small intestine. Klin.khir. no.6:77 Je '62. (MIRA 16:5)

1. Narodichskaya rayonnaya bol'nitsa.
(INTESTINES--SURGERY)

SHELESTYUKOV, G.

Entering the year 1963. Mest.prom. i khud. promys. 3 no.1:6-7 Ja '63. (MIRA 16:2)

1. Glavnyy inzh. Rostovskogo oblastnogo upravleniya bytovogo obsluzhivaniya, Rostov-na-Donu.
(Rostov-on-Don—Service industries)

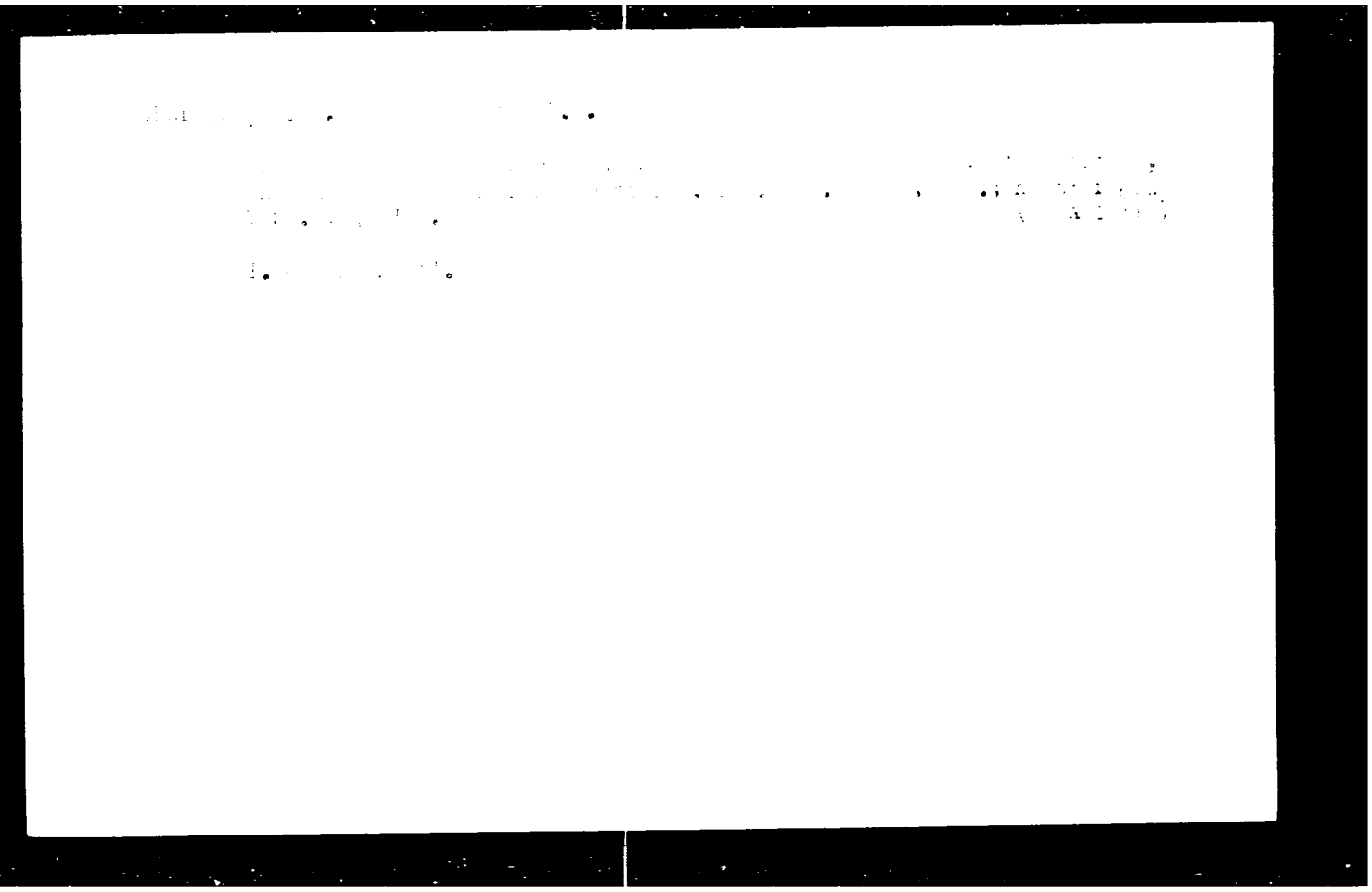
VEZIROV, R.R.; SHELEVOY, G.S.; BORTS, I.S.

Remote control of the operation of flowing wells in the Zyrya area. Azerb. neft. khoz. 39 no.2:23-24 F '60.
(MIRA 14:8)
(Apsheron Peninsula—Oil fields—Production methods)
(Remote control)

SHELEVOY, N.Sh.

Determining the parameters of an oil layer in nonlinear flow into a hydrodynamically perfect well. Neft. khoz. 39 no.11:46-50 N '61. (MIRA 14:12)

(Oil reservoir engineering)



[illegible]Y[illegible]Y, [illegible]

SHEL[illegible]V[illegible]II, [illegible]. V. Mikroklimat iuzhnykh gorodov. Moscow, Akad. medits. nauk SSSR, 1948. 11[illegible].

[illegible]: LC, Soviet Geography, Part I, 1951, Uncl.

Meteorological Abst
Vol. 4 No. 2
Feb. 1953
Bibliography on
Turbulent Exchange

4B-194

Shelelkhovskii, G. V., Zadymlenie gorodov. [Smoke in cities.] Moscow, Ministerstvo Komunal'nogo Khozialstva, 1949. 234 p. 96 figs., 44 tables, 72 refs., 328 eqs. DLC—Useful experimental as well as theoretical information on the dispersion of smoke and gases in cities or industrial areas. Methods of measuring and charting the horizontal and vertical structure of smoke emitted by a stack are treated in considerable detail. Several chapters give the theory of dispersion of smoke and gases under varying conditions of wind, lapse rate, turbulence, stack height, practical size, or type of gas. The theory is profusely supported by tables and charts based on empirical field or laboratory data. A series of recommendations is presented for use in town planning in the light of wind (frequency of direction and speed) and other meteorological conditions. (For fuller abstract *see item* 3G-248, July 1952. *MAB.*) *Subject Headings:* 1. Turbulent diffusion 2. Urban climatology 3. Visibility 4. Atmospheric pollution 5. Smoke abatement 6. Public health.—*M.R.*

551.510.42:551.588.7

1. SHELEYKINA, Ye.N.

2. USSR (600)

4. Surgical Instruments and Apparatus

7. Prevention of premature wear of surgical instruments and apparatus. Fel'd.iakush. no. 11, 1952

9. Monthly List of Russian Accessions, Library of Congress, February, 1953. Unclassified.

SHVEDSKIY, B. P.; MESSINEVA, N. A.; CHERNTSOVA, T. A.; SOBOLEVA, Yu. G.; SHEL'GAS, L.Ye.

Functional study of the adrenal cortex in leucoses under treatment with hormones and chemotherapeutic preparations. Probl. gemat. i perel. krovi no.10:34-42 '61. (MIRA 14:12)

1. Iz gematologicheskoy kliniki (zav. - prof. M. S. Dul'tsin) i klinicheskoy laboratorii (zav. N. A. Messineva) TSentral'nogo ordena Lenina instituta gematologii i perelivaniya krovi (dir. - deystvitel'nyy chlen AMN SSSR prof. A. A. Bagdasarov [deceased]) Ministerstva zdravookhraneniya SSSR.

(LEUCOSIS) (ADRENAL CORTEX) (HORMONE THERAPY) (CHEMOTHERAPY)

MESSINEVA, N.A.; KARASEVA, Ye.V.; GARIN, N.D.; SHEL'GAS, L. Ye.

Study of the blood coagulation system after infusion of the protein blood substitute BK-8 during experimental surgery. Probl. gemat. i perel. krovi 8 no.6: 45-48 Je'63 (MIRA 17:4)

1. Iz TSentral'nogo ordena Lenina instituta gematologii i perelivaniya krovi (dir. - dotsent A. Ye. Kiselev) Ministerstva zdravookhraneniya SSSR.

L 41557-65 EPA(s)-2/EWT(m)/EWP(w)/EPF(c)/EPF(n)-2/EWA(d)/EPR/T/EWP(t)/EWP(z)/EWP(b) Pr-4/Ps-4/Pt-7/Pu-4 IJP(c) MJW/JD/WW/JG

ACCESSION NR: AP5001723 S/0130/64/000/012/0021/0023

AUTHOR: Shelgayev, Yu. N.; Donets, I. D.; Tulin, N. A.

TITLE: Protection of metal with argon during bottom pouring

SOURCE: Metallurg, no. 12, 1964, 21-23

TOPIC TAGS: equipment design, metal casting, argon, bottom pouring/13Kh12NVMFA steel

ABSTRACT: Equipment was designed for protecting metals with argon during bottom pouring (Fig. 1). The apparatus consists of two threaded cylinders--stationary cylinder 6 and the movable cylinder 5 equipped with an asbestos filled closing device 3. The threads are protected from liquid metal and slag by ring 7, ceramic bushing 2 and asbestos packing 4. Prior to pouring, the apparatus is mounted (with the movable cylinder in the lower position) onto a prepared trumpet and connected through pipes 10 and a flexible hose to the argon supply line. The ladle with a special flange 1 is mounted on the apparatus and locked by turning

Card 1/2

L 41557-65
ACCESSION NR: AP5001723

2

handle 9. Air is forced out of the trumpet and the mold, the stopper is opened and the steel poured into unlubricated molds under argon pressure (0.5-0.7 m^3/T at a casting rate of 2.2 T/min.) Examination of 13Kh12NVMFA steel thus poured showed that the macrostructural defects were essentially eliminated, ultrasonically detectable defects were reduced, and the steel had increased strength and ductility, less nonmetallic inclusions and improved ingot surface. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Chelyabinskiy metallurgicheskiy zavod (Chelyabinsk Metallurgical Works)

SUBMITTED: 00 ENCL: 01 SUB CODE: MM

NR REF SOV: 000 OTHER: 000

Card 2/3

KAPEL'NITSKIY, V.G.; SHVED, F.I.; KARTSEV, M.A.; TULIN, N.A.; POZDEYEV, N.P.; SERGEYEV, A.B.; MERENISHCHEVA, I.I.; KALININA, Z.M.; POZDNYAKOV, M.V. Prinimali uchastiye: KUZOVATOV, V.N.; MAKSUTOV, R.F.; MYSINA, G.Ye.; SHELGAYEVA, A.V.; SHIVICHKIN, L.A.; GAYDUK, Yu.A.; GALYAN, V.S.; SOSKOV, D.A.; KHMELEV, I.I.; PARABINA, G.I.

Making steel and alloys in vacuum furnaces. Stal' 23 no.4:325-328 Ap '63. (MIRA 16:4)
(Vacuum metallurgy) (Electric furnaces)

S/129/60/000/009/004/009
E193/E483

AUTHORS: Gorelik, S.S., Candidate of Technical Sciences, Faynbron, S.M., Katkova, A.M. and Shelgayeva, L.V., Engineers

TITLE: Causes of the Formation of Cracks During the Forging of Bars

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, No.9, pp.17-19

TEXT: The object of the investigation, described in the present paper, was to study the effect of the cast structure of the alloy EI437B on its hot workability. To this end, cylindrical specimens, 10 mm in diameter and 20 mm high, were cut from both the outer columnar crystals and the inner equiaxial grains' zones of the ingot, the axes of the specimens being parallel to the ingot axis and normal to the axes of the columnar grains. The specimens were then subjected to various degrees of plastic deformation at room and elevated (950 to 1050°C) temperatures, an Amsler drop-hammer having been used for this purpose. In contrast to specimens consisting of equiaxial grains, those cut from the columnar crystals' zone did not deform uniformly, as

Card 1/2

S/129/60/000/009/004/009
E193/E483

Causes of the Formation of Cracks During the Forging of Bars

indicated by the change of the shape of their cross-section from circular to elliptical. This effect was found to be due to the columnar crystals being more ductile in the direction of their longer axes, the degree of anisotropy of plastic deformation increasing with rising temperature and increasing degree of deformation. The anisotropy of plastic deformation, attributed to the difference in ductility of the interior of the columnar crystals and grain-boundary layers, caused the formation of cracks during hot rolling of material with traces of columnar structure. Although the harmful effects of the presence of columnar grains in alloy EI437B can be minimized by strict control of the forging temperature and degree of deformation, it was concluded that even a small proportion of columnar grains in this alloy renders it unsuitable for critical applications or for manufacture of forged articles of complex shape. There are 2 figures and 2 Soviet references.

Card 2/2

POPOV, Nikolay Alekseyevich; SHELGUNOV, Nikolay Konstantinovich; VINOGRADOVA, N.M., red.izd-va; YERMAKOVA, T.T., tekhn.red.

[Using hydraulic calculations in the designing of navigation channels]. Opyt primeneniia gidravlicheskikh raschetov pri proektirovanii sudovykh khodov. Moskva, Izd-vo "Rechnoi transport," 1958. 94 p. (MIRA 11:12)
(Inland navigation) (Hydraulic engineering)

SHELGUNOV, N.K., inzh.

Use of dredging machinery in the building of river straightening structures. Rech. transp. 17 no.1:32-34 Ja '58. (MIRA 11:3)
(Dredging machinery) (Rivers--Regulation)

SHELGUNOV, N.K., inzh.

Operational experience on the Kama Reservoir. Rech.transp. 17 no.10:43-45 O '58. (MIRA 11:12)
(Kama Reservoir--Navigation)

SHELGUNOV, N.K., inzh.

Using alkaline batteries to illuminate navigational beacons. Rech. transp. 18 no.3:42-43 Mr '59. (MIRA 12:4)
(Electric batteries)
(Beacons)

CHELYUNOV, N.K., inzh.

Sandbank and depth support patterns in sloping zones of reservoirs. Rech.transp. 18 no.5:42-44 My '59. (MIRA 12:9)
(Reservoirs)

SHELGUNOV, N.K.

Mechanization of river improvement operations on the Kama River. Rech.transp. 18 no.9:37-39 S '59. (MIRA 13:2)

1. Zamestitel' nachal'nika sluzhby puti Kamskogo basseynogo upravleniya puti.
(Rivers--Regulation)

SHELGUNOV, N.

Regulating temporary used river sections. Rech.transp. 19 no.3:49-50 Mr '60. (MIRA 14:5)

1. Zamestitel' nachal'nika sluzhby puti Kamskogo basseynovogo upravleniya puti.
(Rivers--Regulation)

NANOBASHVILI, Ye.M.; SHELIA, N.G.; IVANITSKAYA, L.V.

Formation of thallium sulfides. Soob. AN Gruz. SSR 19 no.5:557-562 N '57. (MIRA 11:6)

1.Institut khimii im. P.G. Melikishvili. Predstavleno akademikom R.I. Agladze.

(Thallium sulfides)

ALEKSANDROV, Yu.A.; SHELIKE, R.

Study of the Eu^{148} decay scheme. Izv. AN SSSR. Ser. fiz. 26 no.9:1162-1163 S '62. (MIRA 15:9)

1. Nauchno-issledovatel'skiy fizicheskiy institut Leningradskogo gosudarstvennogo universiteta im. A.M. Zhdanova.
(Europium—Isotopes) (Gamma-ray spectrometry)

SHELIKHANOV, M., uchitel' mashinovedeniya i elektrotekhniki

Schools and scientific institutes. Politekh.obuch. no.11:85-86 N '58. (MIRA 11:12)

1. Khimkinskaya srednyaya shkola No.4 Moskovskoy oblasti.
(Khimki (Moscow Province)--Field work (Educational method))

LUTS·KO, S., inzh.-podpolkovnik; SHELIKHOV, G., inzh.-mayor

Methods of instrument control. Part 3. Magnetic flaw detection.
Av. i kosm. 47 no.3 [illegible] S '64. (MIRA 17:8)

AP6[illegible] SOURCE CODE: UR/0413/66/000/011/0092/0092

INVENTOR: Shelikhov, G. S.; Luts'ko, S. P.; Krents, E. A.

ORG: None

TITLE: A device for automatically controlling the intensity of the magnetizing field in magnetic flaw detectors. Class 42, No. 182386

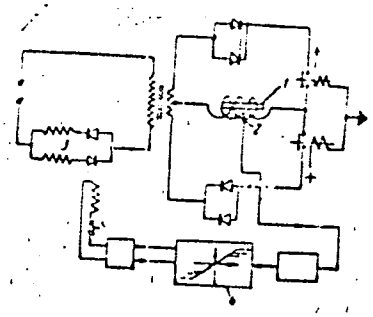
SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 92

TOPIC TAGS: flaw detection, magnetic detection equipment, magnetic field intensity

ABSTRACT: This Author's Certificate intrcduces a device for automatically controlling the intensity of the magnetizing field in magnetic flaw detectors by using an indicator which measures the intensity of the magnetic field at the surface of the component being magnetized. This indicator may be a Hall transducer which generates voltage to serve as a positive feedback for transmission to a magnetic amplifier connected in the magnetizing current source circuit. The device is designed for improved accuracy in magnetic inspection of parts with complex shapes by maintaining a given magnetizing field intensity on the surface of the component. A current limiter with an adjustable range is connected between the transducer and the magnetic amplifier. The range of this limiter is set to correspond to the required intensity of the magnetic field to be checked by the transducer.

Card 1/2 UDC: 620.179.14.05

ACC NR: AP6021469



1--component to be magnetized;
2--transducer; 3--amplifier;
4--limiter

SUB CODE: 09, 13/ SUBM DATE: 10May63

Card 2/2

ACC NR: AP6035735 (N) SOURCE CODE: UR/0413/66/000/019/0093/0098

INVENTOR: Shelikhov, G. S.; Luts'ko, S. P.

ORG: none

TITLE: Method of magnetic inspection. Class 42, No. 186750

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 19, 1966, 98

TOPIC TAGS: nondestructive ~~inspection~~ test, weld inpsection, ~~magnetic weld inspection~~, weld evaluation

ABSTRACT: This Author Certificate introduces a method of nondestructive magnetic weld inspection with a magnetized powder suspension. To make the suspension selective for some specific defects, magnetizing of the suspension is done by a magnetic field adjusted to a certain intensity.

SUB CODE: 13/ SUBM DATE: 09Jan65/ ATD PRESS: 5106

Card 1/1 UDC: 620.179.141

MODESTOVA, T.A. [redaktor]; VIKHROV, P.G.; SHELIKHOV, N.N.

[Textile science for the sewing industry] Materialovedenie shveinogo proizvodstva. Pod red. T.A.Modestovoi. Moskva, Gos.nauchno-tekhn.izd-vo legkoi promyshl., 1953. 185 p. (MLRA 6:8)
(Textile fabrics)

MODESTOVA, Tat'yana Alekseyevna; VIKHROV, Pavel Georg'yevich; SHELIKHOV, Nikolay Nikolayevich; SOSULINA, V.N., redaktor; MEDVEDEV, L.Ya., tekhnicheskiy redaktor

[Textile fabrics and sewing supplies; merchandise guide for the clothing industry] Materialovedenie shveinogo proizvodstva. Moskva, Gos. nauchno-tekhn. izd-vo Ministerstva promysh. tovarov shirokogo potrebleniia SSSR. 1955. 190 p. (MLRA 8:6)
(Textile fabrics) (Sewing--Equipment and supplies)

VEDENKIN, D.F., inzh., red.; ZASLAVSKIY, Ye.I., inzh., red.; KOVAL'SKIY, L.Ya., inzh., red.; VOYTOVA, V.P., inzh., red.; SHELIKHOV, B.N., inzh., red.; NEUDAKIN, K.A., red.

[Price list for the assembly of equipment] TSennik na montazh oborudovaniia. Moskva, Stroiizdat. No.11. 1965. 104 p. (MIRA 18:8)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva. 2. Gosstroy SSSR (for Vedenkin). 3. Nauchno-issledovatel'skiy institut ekonomiki stroitel'stva Gosstroya SSSR (for Zaslavskiy, Koval'skiy, Voytova). 4. Proyektno-konstruktorskoye byuro No.12 Glavmontazhavtomatiki (for Neudakin). 5. Vsesoyuznyy bank finansirovaniya kapital'nykh vlozheniy SSSR (for Shelikhov).

SHELIKHOV, V.M.

Mechanisms of generalization of excitation induced by strychnine and pain stimuli in the cerebral cortex. Fiziol.zhur. 45 no.8:910-915 Ag '59. (MIRA 12:11)

1. From the Department of Physiology, I.M.Setchenov Medical Institute, Moscow.
(CEREBRAL CORTEX, physiology)
(STRYCHNINE, pharmacology)
(PAIN, physiology)

[illegible], V. I., 2nd Mos Ord (diss) -- "An electrophysiological study of the role of the subcortical formations in the generalization of excitement in the cerebral cortex". Moscow, 1956. 16 pp (First Moscow Order of Lenin Med Inst im I. M. Sechenov), 200 copies (KL, No 10, 1956, 137)

SHELIKHOV, V.N.

Electrophysiological studies on the role of subcortical formations during the generalization of excitation in the cerebral cortex. Zhur. nerv. i psikh. 60 no. 2:145-149 '60. (MIRA 14:4)

1. Kafedra normal'noy fiziologii (zav. - prof. P.K. Anokhin) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova. (BRAIN)

SHELIKHOVA, N. A.

Tuberculosis - Hospitals and Sanatoriums

Work of nurses in a tuberculosis wing and special features in the care of patients.
Med.sestra no. 3, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

SHELIKHOVA, N.A., meditsinskaia sestra (Baku)

Surgical treatment of pulmonary tuberculosis and postoperative care of the sick. Med.sestra, no.9:27-29 S '55 (MLRA 8:11)
(TUBERCULOSIS, PULMONARY, surgery
postop. care, nurses role)
(POSTOPERATIVE CARE, in various diseases
tuberc., pulm., role of nurse)

SHELIKHOVA, N.A., meditsinskaya sestra (Baku)

Methods for subcutaneous and intramuscular injections. Med. sestra no.1:21-23 Ja '56. (MLRA 9:3)

(INJECTIONS)

SHELIKHOVA, N.A. (Baku)

Mariia Fedorovna Rimdzenok. Med.sestra 16 no.5:29 My '57. (MLRA 10:7)
(RIMDZENOK, MARIIA FEDOROVNA)

SHELIKHOVA, N.A. (Baku)

Work of the nurses' councils. Med.sestra 17 no.8:48 Ag '58 (MIRA 11:8)
(BAKU--NURSES AND NURSING)

SHELIKHOVA, M.A., meditsinskaya sestra

Work of ward attendants in tuberculosis institutions. Med. sestra 20 no.9:52-53 S '61. (MIRA 14:10)

1. Iz legochnotuberkuleznogo sanatoriya imeni Myasnikova, Baku, poselok Buzovny.

(HOSPITALS--STAFF)

SHELIKHOVA, S. A.

SHELIKHOVA, S.A.

Panotitis etiologically related to foreign body. Vest. oto-rin. 16 no.3:71 My-Je '54. (MLRA 7:7)

1. Iz Leningradskogo nauchno-issledovatel'skogo instituta bolezney ukha, gorla, nosa i rechi (dir. prof. I.A.Lopotko, nauchnyy rukovoditel' deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR prof. V.I.Voyachek).

(FOREIGN BODIES,
*ear, middle, causing panotitis)
(OTITIS, etiology ani pathogenesis,
*for body in middle ear, panotitis)
(EAR, MIDDLE, foreign bodies,
*causing panotitis)

SHELYAKOVSKIY, S. S.

Sheep Shearing

Electromechanical sheep shearing on the "Chervlennye Buruny" breeding farm.
Sots. zhiv. 14 no. 4, 1952.

Monthly List of Russian Accessions, Library of Congress,
July, 1952. UNCLASSIFIED.

5(2), 5(3)

AUTHORS: Andreasov, L. M., Vayl', Ye. I., Kremer, V. A., Shelikhovskiy, V. A.

SOV/75-13-6-6/21

TITLE: Potentiometric Titration of Silver, Copper, Lead and Thallium With Thioacetamide (Potentsiometricheskoye titrovaniye serebra, medi, svintsa i talliya tioatsetamidom)

PERIODICAL: Zhurnal analiticheskoy khimii, 1958, Vol 13, Nr 6, pp 657-660 (USSR)

ABSTRACT: The use of thioacedamide for the potentiometric titration of some metals on the basis of their precipitation as sulfides is of great interest. In the present paper a method is devised according to which thioacetamide is used for the potentiometric titration of silver, copper, lead and thallium. The principal difficulty in the use of thioacetamide as a hydrogen sulfide source in potentiometric titrations is the low rate of hydrolysis in aqueous solutions (Ref 13). In practice only the precipitation of silver ions from ammoniacal solution takes place at sufficiently high velocity. Ions of other metals (Pb, Cu, Hg, Tl and others) are precipitated by thioacetamide very slowly. Increase in temperature and change of the pH-value of the solutions increase the velocity of

precipitation, yet not to such an extent that titration with thioacetamide might be possible. On the basis of a number of experiments the authors of the present paper found that the velocity of the precipitation of lead and some other metals with thioacetamide is considerably increased by addition of a small amount of hydrazine hydrate. The mechanism of this accelerating effect of hydrazine hydrate is obviously complex and was not investigated by the authors. Titration was carried out by means of a sulfidic indicator electrode made of synthetic Ag_2S (Ref 14); a saturated calomel electrode was used as standard electrode. The measurements were performed by means of the PPTVI potentiometer. The compensating current was determined by means of an M-91 galvanometer. The aqueous solution of thioacetamide does not modificate its titer for a long time (about 2 months) and does not require any special conditions of storage. The determinations of Ag, Pb and Tl according to this method (from ammoniacal solution under addition of hydrazine hydrate) are described there in detail. The method is also applicable to the analysis of silver-copper alloys. The determination of both elements

Potentiometric Titration of Silver, Copper, Lead and Thallium With Thioacetamide

SOV/75-13-6-6/21

from one sample is possible since both sulfides differ in solubility and the time in which they are precipitated. First, silver is precipitated from ammoniacal solution, hydrazine hydrate is then added and the copper titrated also with thioacetamide. The most accurate results are obtained at a copper content of 10 - 90%. There are 2 figures, 1 table, and 14 references, 3 of which are Soviet.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A. M. Gor'kogo (Khar'kov State University imeni A. M. Gor'kiy)

SUBMITTED: May 3, 1957

Card 3/3

SHCHERBAN', A.N. [Shcherban', O.N.], akademik; KREMNEV, O.A. [Kremn'ov, O.O.]; KOZLOV, Ye.M. [Kozlov, IE.M.]; SHELIMANOV, V.A. [Shelimanov, V.O.]

Principles for calculating the temperature and relative humidity of air in mines. Dop.AN URSR no.11:1527-1529 '60. (MIRA 13:11)

1. Institut teploenergetiki AN USSR. 2. AN USSR (for Shcherban').
(Mine ventilation)

SHCHERBAN', A.N., akademik; KREMNEV, O.A., kand.tekhn.nauk; KOZLOV, Ye.M. inzh.; SHELIMANOV, V.A., inzh.

Analytical functions describing the processes of temperature and relative humidity charges in mine shafts. Trudy Sem.po gor. teplotekh. no.3:25-28 '61. (MIRA 15:4)

1. Institut teploenergetiki AN USSR.
(Mine ventilation)

SHCHERBAN', A.N., akademik; KREMNEV, O.A., kand.tekhn.nauk; KOZLOV, Ye.M., inzh.; SHELIMANOV, V.A., inzh.

Analytical functions describing the processes of mine temperature and relative humidity changes. Trudy Sem.po gor.teplotekh. no.3:29-32 '61. (MIRA 15:4)

1. Institut teploenergetiki AN USSR.
(Mine ventilation)

ZHURAVLENKO, B.Y.; SHELIMANOV, V.A.

Cooling the air in walls of mines deeper than 1200 m. Trudy Sem.po gor.teplotekh. no.3:83-90 '61. (MIRA 15:4)

1. Institut teploenergetiki AN USSR.
(Donets Basin--Mine ventilation)

SHELIMANOV, V.A., inzh.

Experimental determination of the heat emission of rocks in new workings of deep coal mines. Trudy Sem.po gor.teplotekh. no.3:78-82 '61. (MIRA 15:4)

1. Institut teploenergetiki AN USSR.
(Mine ventilation) (Rocks--Thermal properties)

ZHURAVLENKO, V.Ya., inzh.; SHELIMANOV, V.A., inzh.

Predicting the heat conditions in tunneling for purposes of supplying Yalta with water. Trudy Sem.po gor.teplotekh. no.4:141-145 '62. (MIRA 15:8)

1. Institut teploenergetiki AN UkrSSR.
(Ay-Petri--Tunnels--Ventilation)

KREMNEV, Oleg Aleksandrovich, doktor tekhn. nauk; BOROVSKIY, Vladimir Rudol'fovich, kand. tekhn. nauk; DOLINSKIY, Anatoliy Andreyevich, kand. tekhn. nauk. Prinimali uchastiye: PIYEVSKIY, I.M.; DUKHNENKO, N.T.; SHELIMANOV, V.A.; CHERNOBYL'SKIY, I.I., doktor tekhn.nauk, retsenzent; GAVRILOV, V.N., red.izd-va; ROZUM, T.I., tekhn. red.

[High-speed drying] Skorostnaia sushka. Kiev. Gostekhizdat USSR, 1963. 381 p. (MIRA 17:2)

KREMNEV, O.A.; BOROVSKIY, V.R.; SHELIMANOV, V.A.; SHERENKOVSKIY, E.V.

Heat treatment of synthetic fibers during their stretch forming. Khim. volok no.6:18-23 '63. (MIRA 17:1)

1. Institut teploenergetiki AN UkrSSR.

TERESHCHENKO, V.G., kand.tekhn.nauk; SHELIMANOV, V.A., inzh.

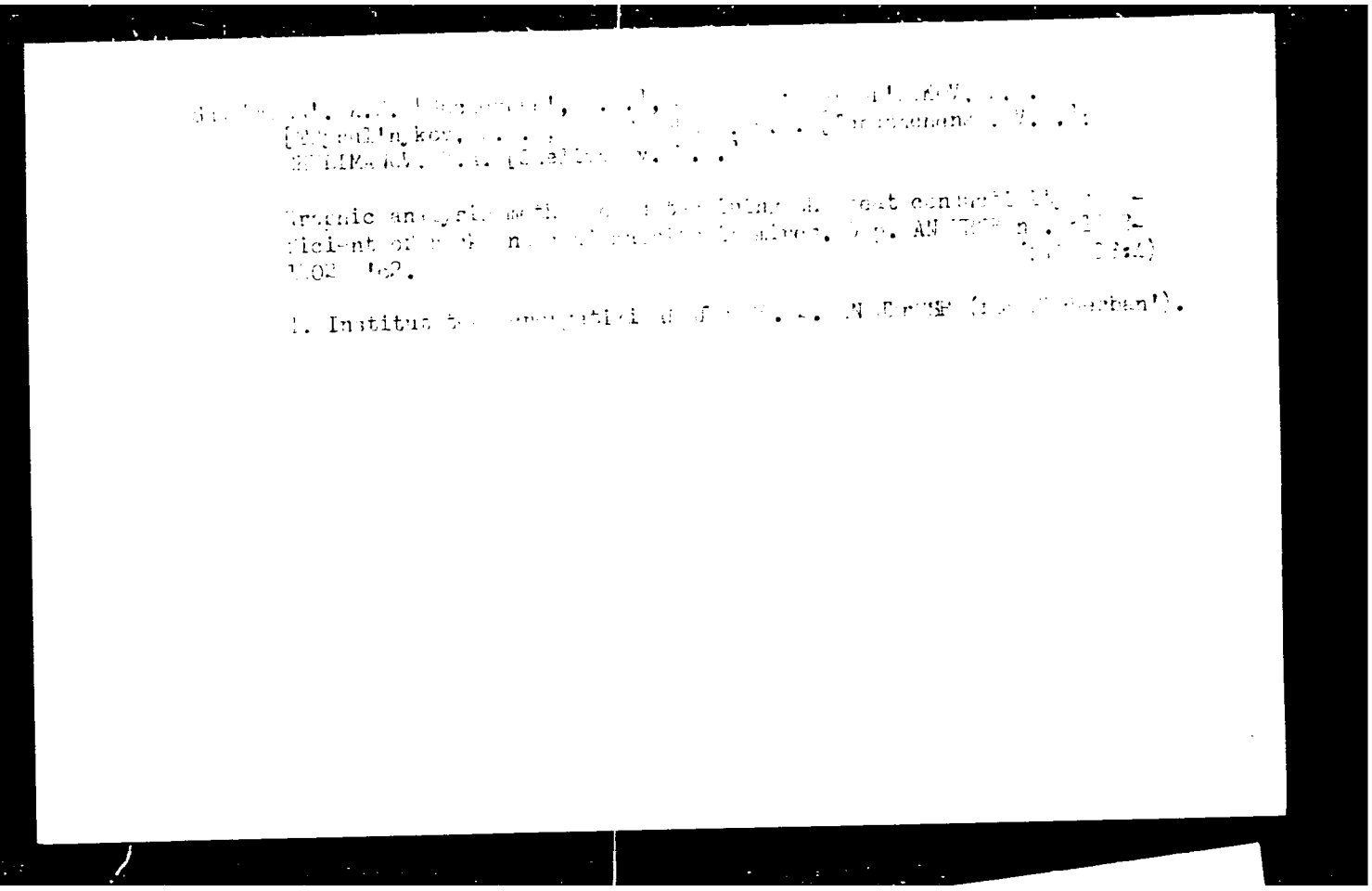
Characteristics of heat release as a result of rock cooling in deep mine stopes. Ugol' Ukr. 7 no.11:27-29 N '63. (MIRA 17:4)

SHELIMANOV, V. A. and KREMNEV, O. A. (Institute of technical thermal physics of Academy of Sciences of Ukrainian SSR)

"Investigation of Blending of temperature fields in transfer of moisture in capillaries"

Report presented at the Section on Heat and Mass Transferr, Scientific Session, Council of Acad. Sci. Ukr SSR on High Temperature Physics. Kiev, 2-4 Apr 1963.

Reported in Teplofizika Vysokikh temperatur, No. 2, Sep-Oct 1963, p. 321. JPRS 24,651. 19 May 1964.



83566

S/020/60/134/001/019/021
B004/B060

5.4500

AUTHORS: Shelimov, B. N., Bubnov, N. N., Fok, N. V., Voyevodskiy, V. V., Corresponding Member AS USSR

TITLE: Detection of Hydrogen Atoms in the Phototransfer Reactions of the Electron

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 1, pp. 145 - 148

TEXT: The authors proceed from the photochemical reaction in the aqueous medium: $M^{n+} + H_2O + h\nu \longrightarrow M^{+} + OH^{-} + H$ (1), where M may be metal ions of variable valency, or anions. The formation of hydrogen atoms in this reaction had been hitherto proved indirectly only. The authors wanted to give direct evidence of H-atoms by means of electric paramagnetic resonance (epr). Because of the strong reactivity and mobility of the H-atoms, investigations were conducted at 77°K in aqueous solutions of H_2SO_4 or H_3PO_4 (in concentrations between 40 and 96%), which contained small quantities of $FeSO_4$ or KI. The samples were irradiated for 1 hour

Card 1/3

Detection of Hydrogen Atoms in the Phototransfer Reactions of the Electron

S/020/60/134/001/019/021
B004/B060

with the ultraviolet light of a ПРК-7 (PRK-7) mercury vapor lamp. The epr signals were recorded by means of a previously described (Ref. 7) epr spectrometer. It was possible to give evidence of the H-doublet. To check the correctness of reaction (1) definitely, experiments were made in solutions which contained heavy water. As is shown by Fig. 1, the D-triplet was observed besides the H-doublet. Further experiments were conducted in the system C_6H_6 - H_2O - H_2SO_4. Here as well (Fig. 2) the H-doublet occurred. The central part of this spectrum, the quadruplet shown in Fig. 3, could not be explained yet, but it might be due to a paramagnetic particle whose free valency is localized on the aromatic ring. Weaker components were detected in the epr spectrum of the H-atom (Fig. 4), which are ascribed to the spin reversal of protons surrounding the H-atom. While the H-lines were strongly saturated in the experiments with benzene, saturation did not take place in the presence of Fe^{2+} due to higher concentration of the paramagnetic ions of a short relaxation time. The study of saturation and intensity distribution between the main and secondary lines in the epr spectrum of H° may serve to clarify specific features of its weak interaction

83566

Detection of Hydrogen Atoms in the Phototransfer Reactions of the Electron

S/020/60/134/001/019/021
B004/B060

with adjacent molecules, and also to establish the distance between H°-atoms and primary particles releasing an electron under the action of light. There are 4 figures and 12 references: 3 Soviet, 8 US, and 2 British.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova (Moscow State University imeni M.V. Lomonosov). Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Chemical Kinetics and Combustion of the Siberian Branch of the Academy of Sciences, USSR)

SUBMITTED: April 27, 1960

Card 3/3

BUBNOV, N.N.; VOYEVODSKIY, V.V.; FOK, N.V.; SHELIMOV, B.N.

Study of electron phototransfer reactions in the solid phase by the electron paramagnetic resonance method. Opt.i spektr. 11 no.1:78-83 Jl '61. (MIRA 14:10)
(Paramagnetic resonance and relaxation)
(Photonuclear reactions)

29010
S/020/61/140/004/011/023
B106/B110

11.1510

AUTHORS: Varbanskaya, R. A., Shelimov, B. N., and Fok, N. V.

TITLE: Reactions of "hot" methyl radicals in solid phase at low temperatures

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 4, 1961, 818-821

TEXT. The authors studied the conditions of stabilization and the conversions of methyl radicals obtained by photolysis of methyl iodide, azomethane, acetone, and acetaldehyde at 77°K. The role of "hot" radicals, i.e., methyl radicals with excess energy, in these processes was clarified. The analysis of gaseous reaction products and data of electron paramagnetic resonance (epr) spectra were used for this study. Transparent solid solutions of the tested compounds in methyl cyclohexane were photolyzed in a quartz vessel cooled by liquid nitrogen. The concentration of solutions was 0.02-0.15 moles/liter, and a ПРК-7 (PRK-7) mercury lamp was used as irradiation source. The epr spectra were recorded on an ЭПР-2 (EPR-2) device (Ref. 9: A. G. Semenov, N. N. Bubnov, Pribory i tekhn. eksperim. (Devices and technical experiments), No. 1, 92 (1959)).

Card 1/4

29010
S/020/61/140/003/011/023
B106/B110

Reactions of "hot" methyl ...

A GC-5 (BS-5) filter pervious to light of $\lambda > 3100$ Å, and a filter filled with a mixture of Cl_2 and Br_2 and pervious to light of $\lambda < 2900$ Å were used in some of the experiments. In the photolysis of azomethane in solid phase, one molecule of nitrogen and ethane each were formed per decomposing molecule of azomethane, and, additionally, methane in a ratio of $CH_4/C_2H_6 \sim 0.04$ independent of the intensity of light. Methane was the only gaseous reaction product in the photolysis of methyl iodide. Acetone was not decomposed under the conditions applied, acetaldehyde slightly decomposed to about equal quantities of CO and CH_4. The fact that the ratio CH_4/C_2H_6 found for azomethane decomposition was independent of the intensity of light indicates that ethane is formed by recombination of methyl radicals in the interior of a "cell", and not by recombination of free radicals. The formation of methane in the photolysis of methyl iodide and azomethane at low experimental temperature ($77^\circ K$) suggests the formation of "hot" methyl radicals in the solid phase. The stability of acetone to photolysis indicates the absence of "hot" radicals. The reason is the large difference between the bond energies of the C-C bond in acetone (77 kcal/mole) and of the C-I bond in methyl

Card 2/4

29010
S/020/61/140/004/011/023
B106/B110

Reactions of "hot" methyl

iodide (54 kcal/mole). The participation of "hot" methyl radicals in the formation reaction of methane was confirmed by photolysis of azomethane in light of different wavelengths. Increasing light energy ($\lambda < 2800$ Å → $\lambda > 3100$ Å) causes the increase of the ratio CH_4/C_2H_6 (1 → 7). Methyl radicals formed in the photolysis of azomethane in solid phase were found to be capable of the following reactions: (1) recombination in the "cell" immediately after formation (formation of C_2H_6); (2) substitution reactions with molecules of the solvent (formation of CH_4 and R', where R' denotes the radical of the solvent); (3) stabilization with emergence from the "cell" (confirmed by the epr spectrum of CH_3 radicals). The ratio of the extent of these three reactions depends on the energy of the absorbed light. Increase of this energy results in an increased formation of methyl radicals reacting according to (2) as compared with those reacting according to (1), and in an increase of methyl radicals reacting according to (3) as compared with those reacting according to (2). The formation of "hot" radicals in the photolysis of CH_3I and $CH_3N_2CH_3$ in solid phase has thus been clearly proved. The character of the reaction of these "hot" methyl radicals

Card 3/4

29010
S/020/61/140/004/011/023
B106/B110

Reactions of "hot" methyl ...

with molecules of the medium (methyl cyclohexane) depends on structure and bond energies of the molecules decomposing with formation of methyl radicals, and on the wavelength of the light used for decomposition. This effect is obviously related to differences in the type of excitation of "hot" radicals which are formed in different ways. Finally, the authors thank V. V. Voyevodskiy, Corresponding Member AS USSR, for assisting in the evaluation of results, and N. N. Bubnov for recording the epr spectra. The spectrum of the methyl cyclohexyl radical obtained by irradiation of frozen methyl cyclohexane (77°K) with fast electrons was recorded by I. I. Chkheidze in the experimental plant of the Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics AS USSR). There are 4 figures, 1 table, and 10 references: 2 Soviet and 8 non-Soviet. The three most important references to English-language publications read as follows: W. C. Sleppy, J. G. Calvert, J. Am. Chem. Soc., 81, 769 (1959); T. Cole, H. O. Pritchard, N. R. Davidson, H. M. McConnel, Mol. Phys., 1, 406 (1958); W. Gordy, C. G. McCormick, J. Am. Chem. Soc., 78, 3243 (1956).

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: March 24, 1961

Card 4/4

38129
S/020/62/144/003/026/030
B124/B101

54500

AUTHORS: Shelimov, B. N., Fok, N. V., and Voyevodskiy, V. V., Corresponding Member of the AS USSR

TITLE: The benzene-photosensitized low-temperature decomposition of hydrocarbons

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 144, no. 3, 1962, 596-599

TEXT: As has been shown earlier, the product from photochemical decomposition of benzene (I), irradiated by ultraviolet light at 77°K in transparent organic glasses is a substituted hexatriene (II) $H_2C=CH-CH=CH-CH=CH-R$ (HR being the hydrocarbon medium in which photolysis is performed), and alkyl radicals are formed in addition. As the formation of alkyl radicals cannot be explained by the reactions hitherto assumed, this and the formation of gaseous products was studied from the epr spectra. Solid-phase reactions of I in methyl cyclohexane (III) and 3-methyl pentane (IV) were studied with concentrations ranging from $1.8 \cdot 10^{-3}$ to $2.1 \cdot 10^{-4}$ mole/liter. The mercury vapor lamp ПРК-7 (PRK-7) was used as the radiation source. After irradiation, the solution was

Card 1/3

The benzene-photosensitized ...

defrosted, then recooled to 77°K, the gas pressure measured and the gas collected for mass-spectrometric analysis. The irradiated solution was subsequently diluted with n-pentane (V) and the amount of II formed by radiation was measured spectrophotometrically at 275 mμ. The epr spectra of the irradiated solutions of I in III were found to be identical to that of the methyl cyclohexyl radical obtained by radiation of frozen (III) with fast electrons. The spectrum of solutions of I in IV consists of 6 high-resolution, hyperfine structure components with a uniform pattern splitting of about 24 oerst which is probably due to the

CH_3
$CH_3-CH_2-\dot{C}-CH_2-CH_3$ radical formed by splitting off one H atom from the tertiary C atom of IV. When I is irradiated in IV, H forms, in addition to the R-substituted II, while C_6D_6 yields small amounts of HD in addition to H_2 in the same hydrocarbon. The simultaneous formation of alkyl radicals is obviously due to the decomposition of the hydrocarbon photosensitized by I. The most important feature of the reaction is that the energy of the light quantum absorbed by I (112 kcal/mole) is transferred, [illegible] in part, to the hydrocarbon molecule, which results in splitting

Card 2/3

The benzene-photosensitized ...

off one C-H bond, whilst the I molecule returns from its excited to the original unexcited state. Neither $C_6H_5^{\cdot}$;($C_6D_5^{\cdot}$) in the epr spectra nor diphenyl in the reaction products could be detected. Thus, the reaction due to ultraviolet radiation proceeds in two steps: (1) formation of substituted II, and (2) the I-photosensitized decomposition of the hydrocarbon leading to the formation of hydrocarbon radicals and of H_2. The yields of II and radicals are maximum with I or C_6D_6 concentrations of $1.6 \cdot 10^{-1}$ and $6.0 \cdot 10^{-2}$ moles/liter, respectively. The yield of II increases 4.2-fold, when the concentration of I is increased from $1.8 \cdot 10^{-3}$ to $1.6 \cdot 10^{-1}$ moles/liter, while the increase of yield of radicals is only 1.2-fold; with C_6D_6, the relative increase is 2.3 and 1.1 fold. There are 3 figures and 1 table.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov); Institut kinetiki i goreniya Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Kinetics and Combustion of the Siberian Department of the Academy of Sciences USSR)

SUBMITTED: February 24, 1962

FOK, N.V., SHELIMOV, B.N., VOYEVODSKIY, V.V.

"On the photosensitized decomposition of hydrocarbons by benzene and its derivatives at low temperature."

Report submitted to the Sixth Intl. Symp. on Free Radicals, Cambridge, England 2-5 July 1963

SHELIMOV, B.N.; FOK, N.V.; VOYEVODSKIY, V.V.

Photochemical decomposition of alcohols at low temperatures. Kinetics of methyl alcohol decomposition. Kin. i kat. 4 no. 4:539-548 Jl-Ag '63. (MIRA 16:11)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova, khimicheskiy fakul'tet i Institut khimicheskoy fiziki AN SSSR.

ODINTSOVA, S.P.; SHELIMOV, B.N.; FOK, N.V.; VOYEVODSKIY, V.V.

Temperature dependence of the rates of benzene photochemical reactions in hydrocarbon solutions. Izv. AN SSSR. Ser.khim. no.3:572-574 Mr '64. (MIRA 17:4)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova i Institut khimicheskoy fiziki AN SSSR.

ACCESSION NR: AP4010761 S/0020/64/154/001/0188/0190

AUTHOR: Vinogradova, V. G.; Shelamov, B. N.; Folk, N. V.; Voyevodskiy, V. V. (Corresponding member)

TITLE: Photosensitization decomposition of hydrocarbons at low temperatures by benzene derivatives

SOURCE: AN SSSR. Doklady, v. 154, no. 1, 1964, 188-190

TOPIC TAGS: benzene derivative, hydrocarbon, aromatic hydrocarbon, hydrocarbon decomposition, photosensitized decomposition, toluene, ethylbenzene, iso-propylbenzene, p xylene, diphenylmethane, chlorobenzene, triphenylmethane, fluorobenzene, acetophenone, ultraviolet light, o xylene, m xylene

ABSTRACT: Diluted solutions of benzene derivatives, such as toluene, ethylbenzene, iso-propylbenzene, o, m and p-xylene, diphenylmethane, triphenylmethane, fluorobenzene, chlorobenzene and acetophenone in 3-methyl pentane and deuterium-containing 3-methyl pentane were subjected to ultraviolet light at 77 C. Hydrogen was isolated and 3-

Card 1/3

ACCESSION NR: AP4010761

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova (Moscow State University), Institut khimicheskoy fiziki, AN SSSR (Institute of Chemical Physics, AN SSSR)

SUBMITTED: 03Sep63 DATE ACQ: 10Feb64 ENCL: 00

SUB CODE: GC NR REF SOV: 004 OTHER: 011

Card 3/3

ACCESSION NR: AP4010761

methylpentyl radicals were formed in all cases except in C_6H_5F, C_6H_5Cl and $C_6H_5CH_3$ solutions. The initial rate of H_2 evolution was measured and related to the concentration of the triplet state of the aromatic molecules. The data agrees with the assumption that molecules of aromatic compounds in the triplet state participate in the photosensitization reaction. The energy of the triplet levels of the aromatic compounds is not higher than 78-85 kcal/mole. The relationship between the rate of the formation of hydrogen and alkyl radicals for toluene and benzene solutions depending on light intensity is investigated and the data are tabulated. The longer life of aromatic molecules in the excited triplet state makes it possible to absorb an extra light quantum while passing to the higher triplet level, and energy excess (as compared to the energy needed to rupture the C-H links) causes the photosensitization decomposition of the solvent molecules. Orig. art. has: 1 table.

Card 2/3

SHELIMOV, B.N.; FOK, N.V.; VOYEVODSKIY, V.V.

Photolysis of ethyl alcohol solutions at 77°K. Kin.i kat. 5 no.6:1008-1013 N-D '64. (MIRA 18:3)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskiy fakul'tet i Institut khimicheskoy fiziki AN SSSR.

VINOGRADOVA, V.G.; SHELIMOV, B.N.; FOK, N.V.

Stabilization of atomic hydrogen in the benzene-photosensitized decomposition of hydrocarbons in the presence of silica gel at 77°K. Kin.i kat. 5 no.6:1121 N-D '64.

(MIRA 18:3)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskiy fakul'tet i Institut khimicheskoy fiziki AN SSSR.

L 10837-66 EWT(m)/EWP(j) RPL WW/GS/RM

ACC NR: AT5023445 SOURCE CODE: UR/0000/65/000/000/0249/0253

AUTHOR: Shelimov, B. N.; Fok, N. V.; Voyevodskiy, V. V.

ORG: none

TITLE: Benzene and its derivatives in photosensitized hydrocarbon decomposition at low temperatures

SOURCE: Simpozium po elementarnym protsessam khimii vysokikh energiy. Moscow, 1963. Elementarnyye protsessy khimii vysokikh energiy (Elementary processes of the chemistry of high energies); trudy simpoziuma. Moscow, 1965, 249-253

TOPIC TAGS: hydrogen, alkane, aromatic hydrocarbon, UV irradiation, EPR

ABSTRACT: Initial rates of formation of hexatriene, alkyl radical, and hydrogen were studied at 77°K as a function of C_6H_6 and C_6D_6 concentrations in 3-methylpentane. The dependence of formation rates of hexatriene and hydrogen upon temperature was studied in various solvents using a $2 \cdot 10^{-2}$ moles/l benzene concentration. All samples were UV irradiated at 77°K. Free radicals were monitored by the EPR technique. The object was to elucidate the mechanism of the simultaneous formation of alkyl radicals and hydrogen during UV irradiation of benzene solutions at 77°K. The hexatriene formation and the photosensitization were not found to be interrelated. The UV irradiation of $C_6H_5CD_3$ in 3-methylpentane at 77°K results in formation of 94% H_2 and 6%

Card 1/2

L 10837-66

ACC NR: AT5023445 O

HD; hydrogen is the sole product when *o*-D- and *p*-D-toluene in 3-methylpentane are subjected to UV irradiation; H_2, HD, and D_2 resulted from UV irradiation of $C_6H_5CH_3$ in 3-methylpentane. A photosensitized decomposition of hydrocarbons according to the following scheme

$$C_6H_5CH_3 + RH \xrightarrow{h\nu} \text{substituted hexatriene}$$
$$C_6H_5CH_3^* + RH\,(RD) \rightarrow C_6H_5CH_3 + R + H\,(D);$$
$$H(D) + RH\,(RD) \rightarrow H_2\,(HD, D_2) + R;$$
$$H(D) + C_6H_5CH_3 \rightarrow H_2\,(HD) + C_6H_5CH_2.$$

occurs in the case of toluene. Results obtained with

$$C_6H_5CD_3 + RH + h\nu,$$

system revealed that the rate of formation of $C_6H_5CH_2$ radical is 10-12 times smaller than the rate of formation of alkyl radicals. It was condluded that photosensitized decomposition of hydrocarbons at 77°K also occurs in ethylbenzene, cumene, *o*-, *m*-, and *p*-xylenes, diphenyl- and triphenylmethane and other compounds. Orig. art. has: 1 formula.

SUB CODE: 07/ SUBM DATE: 23Feb65/ ORIG REF: 003/ OTH REF: 005

jw

Card 2/2

SHELIMOVA, I. N. (Moscow)

"Arrangement of Syntactical Communications for Prepositional-Case Groups."

Theses - Conference on Machine Translations, 15-21 May 1958, Moscow.

VOLOTSKAYA, Z. M., PADUCHEVA, Ye. V., SHELIMOVA, I. N. and SHUMILINA, A. L. (Moscow)

(Sintagmy) of the Russian Language."

1Theses - Conference on Machine Translations, 15-21 May 1958, Moscow.

SHELIMOVA, I N.

Establishment of syntactical relations between prepositional groups in the Russian language. Soob.Otd.mekh.i avtom.inform. rab. no.2:117-141 '61. (MIRA 15:2)
(Machine translating)
(Russian language)

VOLOTSKAYA, Z.M.; SHEMIMOVA, I.N.; SHUMILINA, A.L.

Some quantitative data regarding the forms of nouns and verbs of the Russian language, using materials taken from mathematical texts. Soob. Otd.mekh.i avtom.inform.rab. no.2:254-261 '61. (MIRA 15:2)

(Programming languages (Electronic computers))
(Russian language)

ACCESSION NR: AP4019819 S/0279/64/000/001/0180/0183

AUTHOR: Shelimova, L. Ye. (Moscow); Abrikosov, N. Kh. (Moscow); Bessonov, V. I. (Moscow)

TITLE: The pseudo-binary systems GeTe-SiTe and GeTe-PbTe

SOURCE: AN SSSR. Izv. Metallurgiya i gornoye delo, no. 1, 1964, 180-183

TOPIC TAGS: germanium telluride, silicon telluride, lead telluride, telluride phase study, telluride phase diagram, pseudo-binary system

ABSTRACT: The authors studied the phase diagrams of the systems GeTe-SiTe and GeTe-PbTe (see Figs. 1 & 2 in the Enclosure), as well as solid solutions based on these compounds. Test specimens spaced at 10 mol % were prepared from GeTe, SiTe, and PbTe. The results of microstructure studies were confirmed by thermal analysis and showed that GeTe is the initially crystallizing phase in alloys with up to 30 mol % SiTe. Alloys with 30 mol % SiTe are closest to eutectic character (m.p. 685C), while SiTe crystallizes first in trans-eutectic alloys. The solubility of SiTe in GeTe does not vary significantly with temperature, and the GeTe-based solid solution range is not large. The eutectic state for the system GeTe-PbTe occurs at 20 mol.% PbTe, and the melting point is given as 695C. PbTe crystallizes first when its content is increased. The PbTe-based solid solution

Card 1/4

ACCESSION NR: AP4019819

range is wide, and the second phase was first noted at 60 mol % PbTe. The substantial solubility of GeTe in PbTe was confirmed by X-ray analysis (see Fig. 3 in the Enclosure). Orig. art. has: 5 graphs and 1 table.

ASSOCIATION: none

SUBMITTED: 06Jun63	DATE ACQ: 31Mar64	ENCL: 02
SUB CODE: ML	NO REF SOV: 001	OTHER: 005

Card 2/4

L 11333-65 EWT(m)/EWP(t)/EWP(b) RDW/JD
ACCESSION NR: AP4043574 S/0078/64/009/008/1879/1882

AUTHOR: Shelimova, L. Ye; Abrikosov, N. Kh. B

TITLE: The Sn-Te system in the region of the compound SnTe

SOURCE: Zhurnal neorganicheskoy khimii, v. 9, no. 8, 1964, 1879-1882

TOPIC TAGS: tin tellurium system, tin telluride, tin telluride base alloy, alloy homogeneity region, alloy microstructure, alloy microhardness, alloy composition

ABSTRACT: Sn-Te alloys, in the composition region near the SnTe compound, containing from 49.5 to 51 at% Te with a 0.2—0.3 at% concentration interval were vacuum-melted from twice distilled Te and from Sn with an impurity content less than 0.003%, and homogenized in an argon atmosphere at a temperature ranging from 700 to 300C. Study of the alloy microstructure showed the SnTe compound, previously considered a constant composition compound with a 1:1 ratio of the components, to be a phase with a defective structure

Card 1/3

L 11333-65
ACCESSION NR: AP4043574

and varying composition whose narrow homogeneity region is at a maximum extending from 50.1±0.1 at% to 50.9±0.1 at% at 400C. With increasing Te content, the microhardness of alloys within the homogeneity region increases and remains constant in the two-phase region. As the Te content is increased above the stoichiometric, the alloy lattice constant increases, e.g., from 6.308±0.002Å to 6.294±0.002Å for alloys with 50 and 50.8 at% Te annealed at 700C. An increase in the Sn content above the stoichiometric, however, has no effect on the lattice constant. Alloys annealed at a lower temperature have an analogous composition dependence of the lattice constant; e.g., the constant decreases from 6.324 to 6.302±0.002Å for alloys with 49.9 and 50.9 at% Te, respectively, annealed at 400C. The increase in the lattice constant and the decrease in the microhardness with decreasing annealing temperature are ascribed to a decreasing number of vacancies in the alloy. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: none

Card 2/3

L 11333-65
ACCESSION NR: AP4043574

SUBMITTED: 28Aug63 ATD PRESS: 3106 ENCL: 00

SUB CODE: MM NO REF SOV: 003 OTHER: 007

Card 3/3

L 52062-65 EWT(m)/EWG(m)/T/EWP(t)/EWP(k)/EWA(c) IJP(c) RDW/JD

ACCESSION NR: AP5012971 UR/0078/65/010/005/1200/1205

18
B

AUTHOR: Shelimova, L. Ye.; Abrikovsov, N. Kh.; Zhdanova, V. V.

TITLE: The Ge - Te system in the region of the compound GeTe

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 5, 1965, 1200-1205

TOPIC TAGS: germanium telluride, germanium alloy, tellurium alloy, phase diagram, thermal analysis

ABSTRACT: The region of homogeneity of GeTe and the change in the temperature of transition from the rhombohedral to the cubic lattice as a function of composition were investigated in Ge-Te alloys containing from 49 to 52 at. % Te (with increments of 0.3-0.5 at. % Te). Photomicrography was used to identify the phases in the various alloys. Heating curves were recorded by differential thermal analysis after the alloys had been annealed for 970 hr at 400°C; distinct endothermic effects corresponding to the phase transition were displayed by these curves. The change in the phase transition temperature with composition was also determined dilatometrically by measuring the coefficient of thermal expansion as a function of temperature. On the basis of the thermal analysis, microstructural analysis, and

Card 1/3

L 52062-65

ACCESSION NR: AP5012971

O

thermal expansion data, a phase diagram of the Ge-Te system was plotted in the region of the GeTe compound (see fig. 1 of the Enclosure). The region of homogeneity of the high-temperature germanium telluride modification lies between 50.3 ± 0.1 and 51.5 ± 0.2 at. % Te (430°C). The region of homogeneity of the low-temperature modification is somewhat narrower: it ranges from 50.2 ± 0.1 to 50.9 ± 0.1 at. % Te. The temperature of the polymorphic transformation is 430°C on the germanium side and 365°C on the tellurium side. The eutectic GeTe + Te has a melting point of 380°C. X-ray diffraction was used to measure the lattice constant of the cubic modification of GeTe with the composition at 600°C. Orig. art. has: 5 figures and 4 tables.

ASSOCIATION: none

SUBMITTED: 10Apr64 ENCL: 01 SUB CODE: IC, TD

NO REF SOV: 001 OTHER: 003

Card 2/3

L 52062-65
ACCESSION NR: AP5012971 ENCLOSURE: 01

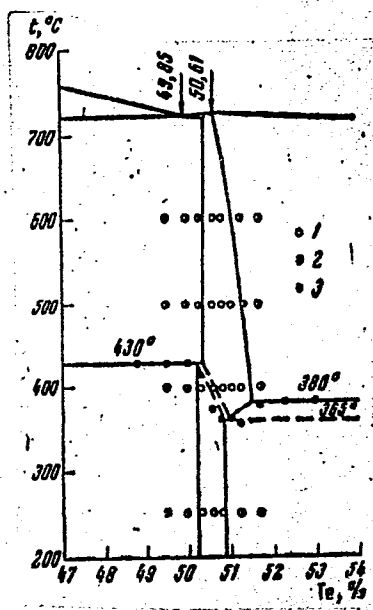


Fig. 1. Phase diagram of Ge - Te system in the region of the compound GeTe

1--single-phase alloys; 2--two-phase alloys; 3--data of thermal analysis

Card 3/3

L 8594-66 EWT(m)/EWG(m)/EWP(b)/EWP(t) IJP(c) RDW/JD

ACCESSION NR: AP5019885 UR/0181/65/007/008/2544/2545

AUTHOR: Novikova, S. I.; Shelimova, L. Ye. 44 74

TITLE: Phase transition in SnTe 27

SOURCE: Fizika tverdogo tela, v. 7, no. 8, 1965, 2544-2545

TOPIC TAGS: tin compound, telluride, solid solution, phase transition, thermal expansion, crystal lattice structure

ABSTRACT: To check on similarities between SnTe and GeTe, with which it forms a continuous series of solid solutions, the authors investigated the thermal expansion of SnTe, with particular attention to temperatures near 100K, where a polymorphic transition was expected. The measurements were made with a quartz dilatometer from 20 to 300K. The samples were prepared from high purity tin containing less than 10^{-3}% impurities, and A-1 tellurium purified by double vacuum distillation. Two samples were tested containing 50.4 at.% Te, in the form of cylinders 16.07 and 10.86 mm long. A plot of the results is shown in Fig. 1 of the Enclosure. The dip at 75K can be related to the expected polymorphic transition in SnTe from the rhombohedral low temperature modification to the cubic high temperature modification. Orig. art. has: 1 figure.

Card 1/3

51
49
B

2

L 8594-66

ACCESSION NR: AP5019885

ENCLOSURE: 01

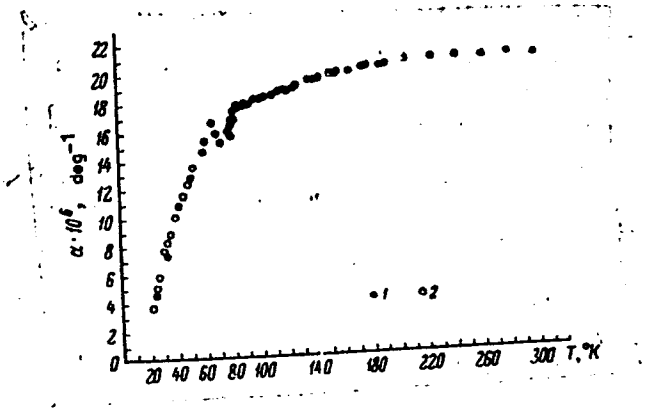


Fig. 1. Dependence of the coefficient of thermal expansion on the temperature.

1 - Measurements under equilibrium temperature conditions,
2 - dynamic measurements.

jw

Card 3/3

ACC NR: AP7002396 SOURCE CODE: UR/0363/66/002/012/2103/2109

AUTHOR: Shelimova, L. Ye.; Abrikosov, N. Kh.; Zhdanova, V. V.; Sizov, V. V.

ORG: Institute of Metallurgy im. A. A. Baykov, Academy of Sciences, SSSR (Institut metallurgii Akademii nauk SSSR)

TITLE: Study of the systems PbSe-GeSe and GeSe-GeTe

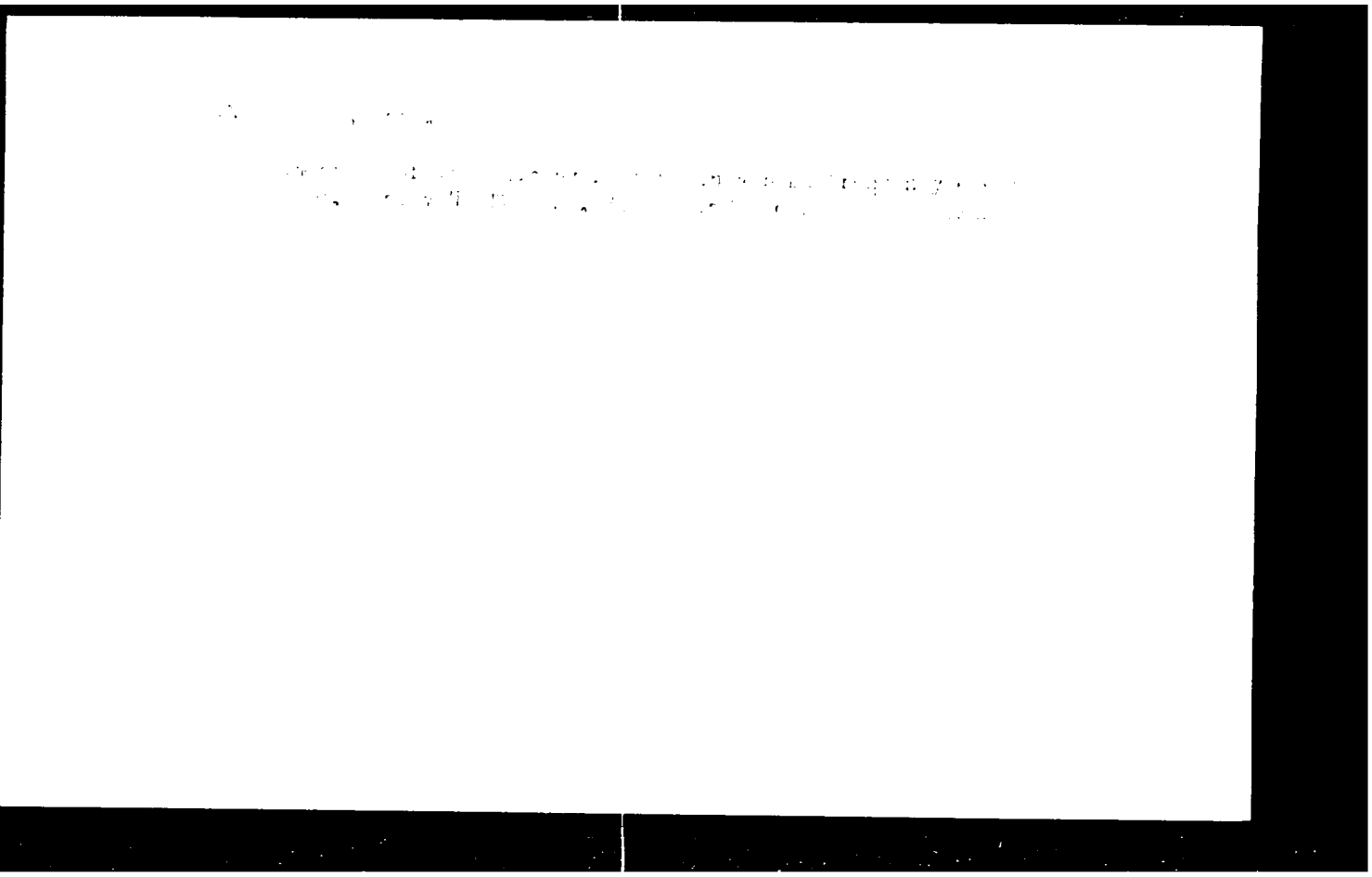
SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 12, 1966, 2103-2109

TOPIC TAGS: lead compound, selenide, telluride, germanium compound, phase transition

ABSTRACT: The phase equilibria and solid solutions in the systems PbSe-GeSe and GeSe-GeTe were studied by thermal, microstructural, x-ray and dilatometric analyses in the 20-620°C range. It was found that the PbSe-GeSe system is not a quasi-binary section of the ternary system Ge-Pb-Se. The polythermal section of GeSe-GeTe showed the existence of a continuous series of solid solutions at temperatures near the solidus. Phase transformations at low temperatures connected with the polymorphism of GeSe and GeTe were investigated, and the boundaries of solid solutions were determined in both systems. Orig. art. has: 7 figures and 2 tables.

SUB CODE: 07/ SUBM DATE: 25Dec65/ ORIG REF: 003/ OTH REF: 007

Card 1/1 UDC: 546.815'231+546.289'231
546.289'231+546.289'241



89344

S/191/61/000/001/009/015
B101/B205

15.8450

AUTHORS: Fedorova, I. G., Shelina, T. A., Britsyn, N. L.

TITLE: Application of high-frequency heating in manufacturing tubes from glass-reinforced plastics

PERIODICAL: Plasticheskiye massy, no. 1, 1961, 35-37

TEXT: This is a report on attempts of accelerating the hardening of tubes made of glass-reinforced plastics (GRP), which are used as props. The work has been carried out by Nauchno-issledovatel'skiy institut tokov vysokoy chastoty im.prof. V. P. Vologdina (Scientific Research Institute of High-frequency Currents imeni Professor V. P. Vologdin) in cooperation with Laboratoriya anizotropnykh struktur IKhF AN SSSR (Laboratory of Anisotropic Structures, Institute of Chemical Physics AS USSR) and Leningradskiy zavod sloistykh plastikov (Leningrad Plant for Laminated Plastics). The tubes are manufactured by winding GRP sheets round metal rods which are then heated by electric coils. Hardening is continued in chamber kilns at 120-180°C. On account of the low thermal diffusivity of the material, heating and hardening take 6-20 hr, depending on the wall thickness of the

Card 1/3